

A STUDY OF EMPLOYMENT POTENTIAL AND TRAINING REQUIREMENTS FOR
NON-FARM AGRICULTURE OCCUPATIONS IN TREO COMMUNITY HIGH
SCHOOL AND ELLIS HIGH SCHOOL DISTRICTS,
WAKEENEY AND ELLIS, KANSAS

by

Robert M. Schneider

B. S., Kansas State University, 1954

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

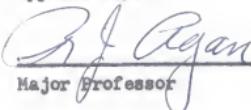
MASTER OF SCIENCE

School of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1965

Approved by:


B. J. Agan
Major Professor

LD
2668
R4
1965
S359
C-1.2

ACKNOWLEDGMENTS

The author wishes to express his appreciation to the many agri-business men in the Trego County Community School District and the Ellis High School District for their cooperation in the gathering of data. Special acknowledgments are due Dr. Raymond J. Agan, Kansas State University, major advisor of the author.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION AND STATEMENT OF PROBLEM	1
Objectives and Procedure Used	3
Definition of Terms Used	4
II. REVIEW OF LITERATURE	6
Literature on Agricultural Occupations	6
Literature on High School Training for Agricultural Occupations	9
Literature on Post High School Training for Agricultural Occupations	13
Training for Adults in Agriculture	14
III. RESULTS OF THE SURVEY	16
Job Opportunities by Groups	18
Salary Scales	20
Training Programs Used	20
Suggested Training Changes	22
IV. SUMMARY AND CONCLUSIONS	26
V. IMPLICATIONS OF THE STUDY	30
High School Training	30
Post High School Training	31
Suggestions for Further Study	32
BIBLIOGRAPHY	34

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

For many years the public high school vocational agriculture courses, established under the Smith-Hughes Act of 1917, served as training programs for ranching and farming. This law limited agricultural instruction to training for those students who were to become established in farming as is stated in section 10 of the Act:

... that such education shall be of less than college and be designated to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home. . . .

With the increase in size and reduction in number of farms, it became evident that not all high school students who wished to farm could do so. The U.S. News and World Report showed that twenty years ago there were 6 million farms in the United States but in 1964 there were 3.4 million farms.¹ This was approximately a 43 per cent reduction in twenty years. The report continued by quoting President Johnson who on January 25, 1965, made the following comments about the number of farms needed in the future:

... In view of the market outlook for farm commodities at home and abroad, farming alone cannot be expected to provide a decent living in the future for more than about 1 million farm families, even with continued Government assistance. Many low-income farm families will have to find other ways of earning a living or other sources of income. . . .

¹"Liquidation Ahead for 2.3 Million Farmers?" U.S. News and World Report (March 22, 1965), 59.

While this trend in reduction of number of farms was taking place, there was another trend developing. This was the expansion of non-farm agriculture occupations. A study done by Clark showed that there was to be a need for four to five men in non-farm agriculture occupations for each man on the farm.² This information indicated further study was needed in the training for these non-farm agriculture occupations.

In 1963 the Kansas Legislature passed Senate Bill No. 438 which provided for the establishment of area vocational technical schools within the state of Kansas. The declared purpose of the bill as given in section 1 was:

It is the intention of the Legislature and the purpose of this act to provide a means whereby the state of Kansas in cooperation with local communities can provide facilities for training and preparation of students for productive employment as technicians and skilled workers, and to more nearly equalize educational opportunity.

With the passage of this bill, plans were started to establish one of these schools at Hays, Kansas. The school districts of Ellis and Trego County were planned to be included in the Hays Area Vocational Technical School District. One of the requirements set up by the Legislature was that these schools would train persons for employment in their own school district. This made it important to know the potential of employment in non-farm agriculture occupations.

²Raymond M. Clark, "The Nature of Non-Farm Agricultural Occupations," New Dimensions in Public School Education in Agriculture (Danville, Illinois: Interstate Printers and Publishers, Inc.), p. 9.

The author was of the opinion that by taking a survey, one would be able to adjust the course of study in the present vocational agricultural programs to meet many of the students' needs. It was a generally understood plan that subject matter which could not be met through the local vocational agricultural departments would be included in the curriculum of the Hays Area Vocational Technical School. This would give training to the student in preparation for ranching and farming as in the past and give additional training to those entering the field of non-farm agriculture occupations.

I. OBJECTIVES AND PROCEDURE USED

The objectives of the study were: (1) to survey the employment opportunities in agricultural related occupations in Trego County and the community of Ellis, and (2) to suggest what changes in the educational program should be made to more fully prepare these students for their chosen occupations.

In order to achieve the purpose of objective number one, the following were completed:

- I. A complete list of agricultural business firms of Trego County and the community of Ellis was compiled through the assistance of the Trego County Extension Service and the local telephone directories.
- II. Each of these firms was interviewed by the author and asked a series of questions relating to employment opportunities in their field of business.

III. This information was compiled, simple measures of central tendency were made and reported.

In order to achieve the purpose of objective number two the following were completed:

I. The employers were asked questions regarding the training program used for employees and the adequacy of such a program.

II. The employers were also asked a series of questions regarding their opinion of the high school training as it was in their community and suggestions for improvement were requested.

III. The author used this information to suggest changes in the vocational agriculture program and curriculum inclusions in the Hays Area Vocational Technical School.

This study was limited to those firms who did 50 per cent or more of their gross business with farmers. These were considered agricultural in nature and included in the tabulation. It was planned that one of the first questions asked of the firms was the per cent of dollar gross business done directly with the farmer. In all interviews, the highest ranking member of the firm was interviewed. In no case were the women employees included in the survey. It was possible that some of the services, such as bookkeeping, being done by women at the time of the interview might be done by men at a later date.

II. DEFINITION OF TERMS

For the purpose of this study several terms were set aside for

special definitions as applied specifically to the investigation and report. The definitions selected did not necessarily coincide with the dictionary definitions or those of common usage. These terms were arranged in alphabetical order and listed as follows:

Area Vocational School. Those vocational or technical schools organized and approved by the state board and officially designated as area vocational schools under the provisions of Senate Bill No. 438.

Agricultural Related Occupations. (Usually referred to as agri-related occupations or non-farm agricultural occupations in the report of this study.) Those occupations where the employer or business firm is doing more than 50 per cent of his business with the farmers.

Agri-business Firms. Those business firms doing 50 per cent or more of their dollar gross business with farmers.

CHAPTER II

REVIEW OF SELECTED RELATED LITERATURE

Much has been written in regard to agricultural occupations and the training for employment in these occupations. A brief summary of selected articles concerning the work done on problems closely related to the one at hand has been given here.

I. LITERATURE ON AGRICULTURAL OCCUPATIONS

Agriculture, the nation's largest industry, is as complex as it is basic, states Tenney, and the economy of the nation is founded on this industry.¹ While in the past, most of the emphasis of agricultural education has been on the production, there have been changes taking place to shift this emphasis. In 1954 there were approximately 6 million farms in the United States while there were about 3.4 million farms in 1964.² This was a reduction of 43 per cent in the number of farms in 20 years. At the time of this writing, the transition of farm reduction appeared to be about half completed as was pointed out by President Johnson in his January 25, 1965 message to Congress. He said that it appeared likely that the number of farms might be reduced to 1 million in the future.

¹A. W. Tenney, "Agricultural Occupations - The Educational Needs in the United States," Agricultural Education Magazine, 35:9 (April, 1963), p. 211.

²"Liquidation Ahead for 2.3 Million Farmers?" U.S. News and World Report (March 22, 1965), 59.

A review of several State of Kansas Census reports and published materials was made and indicated that similar trends had been taking place on the state and county levels. Table I shows that the number of farms in Kansas went from 120,167 in 1954 to 101,000 in 1964. This was a reduction of 19,167 farms or approximately a 15 per cent reduction. For Ellis County, the figure went from 1,065 farms in 1954 to 922 farms in 1964. This was a reduction of 143 farms or a 13 per cent reduction for the county in 10 years. Trego County was having a reduction also as they went from 796 farms in 1954 to 628 farms in 1964. This reduction of 168 farms amounted to 21 per cent. These figures pointed out the fact that the demand for farm operators was becoming less but these farms were becoming larger.

It was apparent to the writer from the above data that the farmer started managing larger investments under more scientific conditions. It was pointed out by Tenney that the average investment per worker in industry was \$15,000 in 1962 while that of the average farm operator at the same time was \$50,000 and would likely climb to between \$150,000 and \$250,000 by 1975.³

It was stated by Clark that fifty years ago the farmer produced much of his own power through horses and the fuel for power was raised in the form of crops, but today both of these items must be purchased

³A. W. Tenney, "Agricultural Education for a Changing Rural America," American Vocational Journal, 37:3 (March, 1962), p. 13.

TABLE I
NUMBER AND SIZE OF FARMS BY YEARS

	1954		1959		1964	
	Number of Farms	Acres per Farm	Number of Farms	Acres per Farm	Number of Farms	Acres per Farm
Kansas	120,167	416	104,347	480	101,000	494
Ellis County	1,065	512	977	561	922*	593
Trego County	796	698	690	775	628*	852

*Estimated by author from Kansas State Board of Agriculture records.

through tractors and tractor fuels.⁴ The same can be said for many other farm items. This indicated that the farmer was no longer self supporting but has had to rely on agri-related business. Additional work done by Clark show a total labor force in 1962 of 66.7 million, while 21.7 million were employed some place in agriculture. Of those employed in agriculture, 10 million were in distribution, 6 million in servicing or producing for farmers while 5.7 million were in actual farming.⁵ This showed that there were approximately three persons in agri-business for each farmer and some authorities thought this would expand to four to five persons in non-farm agriculture occupations for every one in production.

II. HIGH SCHOOL TRAINING FOR AGRICULTURAL OCCUPATIONS

As stated earlier, when vocational agricultural training was established under the Smith-Hughes Act of 1917, it was designed to train boys in production agriculture. Tenney stated that there could be little doubt that this public school program had had a tremendous influence in improving the efficiency of the American farmer.⁶ Another point concerning vocational agricultural instruction was brought out in

⁴Raymond M. Clark, "The Nature of Non-Farm Agricultural Occupations," New Dimensions in Public School Education in Agriculture (Danville, Illinois: Interstate Printers and Publishers Inc.), p. 9.

⁵Ibid.

⁶A. W. Tenney, "Agricultural Education for a Changing Rural America," American Vocational Journal, 37:3 (March, 1962), p. 12.

a survey done by Hamlin where 1.7 per cent of the graduates in vocational agriculture were unemployed while a national figure for youth of comparable age was 16 per cent.⁷ The preceding figures were summarized when Hamlin said:

We seem to have in our combination of farm rearing, supervised farming, class work in agriculture, the Future Farmers of America, and a general high school education, a formula which turns out individuals who want to work and can find jobs. Many people are seeking a formula that would produce results as good.

According to a recent survey, the public schools of the United States have graduated 67,000 students in vocational agriculture each year from nearly 10,000 departments.⁸ Of these, approximately 30 to 40 per cent of them have become established in farming, stated Mumphrey.

In 13 southern states, the number of departments of vocational agriculture decreased by 302 between 1957 and 1962 but the number of teachers of vocational agriculture increased by 230 in the same area during this same period.⁹ This indicated a trend of multi-teacher departments that had been taking place over the nation. From this data it was assumed by the writer that agriculture was becoming so complex that it was difficult for one instructor to keep pace with all segments of it.

⁷H. M. Hamlin, "Integration into the Vocational Education Movement," Agricultural Education Magazine, 37:6 (January, 1965), p. 176.

⁸Anthony Mumphrey, "Too Many Vocational Agricultural Graduates?" Agricultural Education Magazine, 37:7 (February, 1965), p. 203.

⁹Hamlin, op. cit.

With the passage of the National Vocational Education Act of 1963, the programs of vocational agricultural education were updated. Changes made it possible to include the instruction of agri-business and it was no longer necessary for each student to have a supervised farming program. This made it possible for the vocational agriculture instructor to include a broader course of instruction and to serve more students.

Since agricultural education embraces two phases, Tenney stated that it seemed logical that there must be a two track system, one for those returning to the farm and one for those entering agri-business.¹⁰ This division would take place in the junior or senior year in high school. Tenney continued by listing four distinctive groups of students whose future occupations would require knowledge and skill in agricultural subjects.¹¹ They are:

- a. Those who plan to engage in productive agriculture.
- b. Those who enter non-farming agricultural occupations directly from high school.
- c. Those who obtain further technical training after high school in preparation for specific agricultural occupations.
- d. Those who continue their education after high school for entering agricultural professions.

A program was conducted by Sparrow where the students had

¹⁰A. W. Tenney, "A Basis for New Courses of Study," Agricultural Education Magazine, 37:8 (March, 1965), p. 211.

¹¹Ibid.

opportunities to study and participate in agri-business occupations.¹² In this case the students spent 1 week studying points to consider of a series of occupations. At the end of this week, the students spent 1 week at each of four different occupations. The students worked two hours of school time each day and one hour after school for five days. At the end of each week the students moved to a different occupation. After four weeks of observation and participation, the students returned to the classroom and spent an additional two weeks in summarization and reports. A similar program was conducted by Lawrence, except he spread the work experience class over a semester.¹³

It was pointed out by Garner that one must not overlook the fact that the basic course of instruction in vocational agriculture has encouraged interest in some students in obtaining a college degree in agriculture.¹⁴ Garner concluded with the following statement about the vocational agriculture instructor:

When he accepts youth into his classes who have an interest in agriculture, even though their opportunities for establishment in farming are limited, when he assists them in making occupational choices and in developing and implementing individual career plans, when he provides them a basic knowledge of scientific agriculture,

¹²Richard L. Sparrow, "Exploring Farm Related Occupations," Agricultural Education Magazine, 36:10 (April, 1964), p. 228.

¹³Layle D. Lawrence, "Agricultural Occupations - A Course for Seniors," Agricultural Education Magazine, 36:7 (January, 1964), 140.

¹⁴Raymond Garner, "Promising Patterns in High School Vocational Agriculture," Agricultural Education Magazine, 37:8 (March, 1965), p. 214.

helps them develop leadership abilities, offers them opportunities to extend their learning by such means as individual farming programs, land laboratories, school farms, group projects, placement on local farms and placement for occupational experience in local business or service occupations, when he assists them to find regular employment or encourages them to seek appropriate high school training, it becomes apparent that the teacher of vocational agriculture has performed a man-sized educational service.

III. POST-HIGH SCHOOL TRAINING OF YOUTH FOR AGRICULTURAL OCCUPATIONS

Although there has been much emphasis in the establishment of Young Farmer programs in the high schools of the nation in the past years, Tenney pointed out that less than 10 per cent of these men were being served in 1963.¹⁵ Tenney continued by pointing out that there were approximately one million young farmers who could profit from organized instruction in agriculture. This emphasized a field of agricultural instruction that was not being met.

Many times there have been students who enjoyed farming but did not have the opportunity to do so and did not have a marketable skill when they graduated from high school. A vocational school set up to handle students such as these is located at Alfred, New York.¹⁶ This school graduated 17 boys in mechanical sales and service work in 1964 and had inquiries for 50. Alfred estimated that seven technically trained men were needed for each farm equipment engineer.

¹⁵A. W. Tenney, "Agricultural Occupations - The Educational Needs in the United States," Agricultural Education Magazine, 35:9 (April, 1963), p. 211.

¹⁶"Where Farm Boys Learn Sales and Service," The Furrow (March-April, 1964), p. 19.

The young men of Kansas were willing to attend such a vocational technical school as was indicated by a study conducted by McCune where 70 per cent of the respondents said that they would attend such a school if they had the opportunity.¹⁷ A majority of 93 per cent of these men selected evening as the best time for further training as this would enable them to continue in their present jobs in the day time.

IV. TRAINING FOR ADULTS IN AGRICULTURE

In 1963 there were from two to three million adult farmers who could of profited from organized instruction in agriculture, reports Tenney.¹⁸ Many of these were older men who might be forced to go to the city. If they had been forced to move to the city, they would of found it difficult to adjust and would not of had the proper skills to seek employment. Many of them might of found themselves and their families on relief rolls. Even with limited income, many of these men would rather of stayed on the farm and forgone some of the modern conveniences that others had, reported Lund.¹⁹ If instruction could be given to help them utilize their time better through farm mechanics training, they could then purchase used equipment or repair their

¹⁷Duane A. McCune, "Kansas High School Grade Want Area Vocational Technical Schools," Agricultural Education Magazine, 37:6 (December,

¹⁸A. W. Tenney, "Agricultural Education for a Changing Rural America," American Vocational Journal, 37:3 (March, 1962), p. 12.

¹⁹Duane Lund, "Opportunities for Agricultural Education," American Vocational Journal, 40:2 (February, 1965), p. 21.

present equipment. He suggested that it was better to help them in their own environment and keep them self-supporting than send them to the city and have some of them end up on welfare. Lund continues by saying:

These families may never own a new car, the man of the family may have only one new suit in five or ten years, the housewife will not have a new dress for every change of the season or special event, but they will be happy.

CHAPTER III

RESULTS OF THE SURVEY

A complete list of agri-business firms of Trego County and the community of Ellis was obtained. This list contained 31 firms. Two of these were not contacted due to the fact that they had gone out of business, another two were found to be doing less than 50 per cent of their business with the farmer so were removed from the list. This left a total of 27 firms in Trego County and the Ellis community that were doing 50 per cent or more of their business with the farmers. This list was divided into four groups according to their line of business. They were:

1. Farm machinery and implement dealers and machine repair shops.
2. Earth contractors for farm services such as terraces, dams, and wells.
3. Elevators and feed mills.
4. Others.

The relative importance or size of each group is shown in Figure 1. Elevators and feed mills made up the largest single group of firms as there were eleven of them which made up 43 per cent of the total. The next largest was the farm machinery dealers and repair shops which consisted of seven firms or 26 per cent of the total. The businesses who did earth contracting work for the farmer were the third largest with six firms or 22 per cent of the total. Many of these men did not work full time at this business but all that were included



FIGURE 1
TYPES AND NUMBERS OF AGRI-BUSINESS FIRMS

worked 50 per cent or more of their time in this business. There were three firms who did not fall into any of the above classifications and were listed under "other." The relative importance or size of each group is shown in Figure 1.

I. JOB OPPORTUNITIES BY GROUPS

In order to determine the job opportunities available for young men in each of these areas, the firms were asked employment figures as is shown in Table II. It was found that there were a total of 93 men employed in agri-business by these firms. The largest single employment group was the elevators and feed mills with a total of 35 men. The farm machinery dealers employed 27 men at the time of the interview but they had the largest figure for men needed in the next two years and again for the next five years with 14 and 22 men respectively. This indicated that they had the greatest growth potential in the next five years of any group listed. Many of these firms stated that if they could find properly trained young men at the time of the interview, they would place them on the payroll immediately. There was a high demand for men who were well trained in farm mechanics and repair. The smallest employing group was the earth contractors. At the time of the interview, the contractors were rather pessimistic about their future as this was just after President Johnson had recommended that the federal budget for soil conservation practices be cut and these men expected the construction of terraces and dams to be curtailed. With a grand total of 93 men being employed in these four areas and 49

TABLE II
CURRENT AND POTENTIAL EMPLOYMENT OF MEN
IN VARIOUS BUSINESS GROUPS

Business groups	Currently employed	New men employed in the past two years	New men needed in the next two years	New men needed in the next five years
Farm Machinery and implement	27	17	14	22
Earth Contractors	11	4	6	7
Elevators and feed mills	35	11	7	13
Others	20	5	3	7
Total	93	37	30	49

additional men being needed in five years, there appeared to be employment for ten new young men each year for the next five years.

The two high schools in the survey district had students graduating with three or more units of vocational agriculture as is shown in Table III. During the years of 1962 through 1964, these two high schools had a total of 58 graduates with three or more units of vocational agriculture for an average of 19.33 students per year. From this information one could assume that over 50 per cent of these graduates could find employment in non-farm agriculture occupations in the surveyed district if they had the proper training.

II. SALARY SCALES

The salary scales for these men varied much. It ran from a low of \$1.25 per hour for 40 to 50 hours per week up to \$100 per week plus commission for mechanics. This commission was up to \$50 per week. The mechanics ranked at the top of the pay scale of men who did not have managerial responsibility. This again reflected the shortage of properly trained mechanics. Several of the elevators and earth contractors paid their help a base wage plus a commission according to the volume of business. This gave some wide ranges of pay. One earth moving firm payed on commission only and the owner said that an employee could earn up to \$7,000 per year on this plan.

III. TRAINING PROGRAMS USED

The training programs that these firms had for their employees

TABLE III

HIGH SCHOOL GRADUATES WITH THREE UNITS OF
 VOCATIONAL AGRICULTURE TRAINING
 BY YEARS AND HIGH SCHOOL

SCHOOL	1962	1963	1964	Total	Average
Ellis High School	6	9	11	26	8.66
Trego Community High School	11	7	14	32	10.66
TOTAL	17	16	25	59	19.33

was limited as only nine of the 27 firms had any organized training program other than on-the-job training. None of the earth contractors had any planned program of training as is indicated in Table IV. Three of the eleven elevators and feed mills had training programs while five of the seven machinery dealers and repair shops had training programs that their employees could attend. In all cases these training programs were held by either the wholesaler and supplier or by the Extension Service of Kansas State University.

IV. SUGGESTED TRAINING CHANGES

Each of the employers were asked for information regarding possible improvements in the high school training programs. There was little consistency in their answers but some of the most common points were:

1. Improve the spelling ability of the graduates.
2. Improve the writing ability of the graduates.
3. Give the students a better understanding of the capitalistic, free enterprise system of business.

The last item was not always mentioned as such, but always returned to the theme of economics. Many employers felt that the graduates did not know enough about economics and too many of their new employees had the attitude that the world owed them a living rather than they should receive in proportion to what they produced. A broader understanding of the profit and loss form of business was mentioned frequently.

TABLE IV
TYPES OF TRAINING PROGRAMS
OFFERED TO EMPLOYEES

EMPLOYING GROUP	ON-THE JOB TRAINING ONLY	TRAINING BY AN OUTSIDE AGENCY
I. Farm machinery and implement dealers and repair shops	2	5
II. Earth Contractors	6	0
III. Elevators and feed mills	8	3
IV. Others	2	1
TOTAL	18	9

Another area of question was the mechanical ability of the students. When checking on the mechanical ability of employees, employers of earth construction firms mentioned that if the man had a farm background, his mechanical ability was satisfactory to operate heavy equipment, but if he was an urban youth, he needed additional mechanical training. This was not for the repair of the equipment but just to operate large and expensive machinery. This indicated that the mechanical training that the students had received in vocational agriculture met many of their needs but might also show some kind of a similar mechanical program was needed for the urban youth.

A work-experience program was explained to the employers where the junior or senior high school students would study business operation in the classroom at the first of the year and then report to different agri-business firms in the community for experience in this line of business. After working for this firm for two to four hours a day for five days a week for six weeks, the students would return to the classroom for group discussion and reports on their experiences. The students would be spread over the community so there would not be over two students at one firm at a time. There would be no exchange in money between the school, student, or business firm. One hundred per cent of the firms reported that this would be good and they would attempt to cooperate under such a program if it were started. Some firms were concerned with their liability insurance and some were concerned with the minimum employee age law. Another problem mentioned by the earth construction firms was the fact that they moved around considerably and

might be many miles from the school, thus making it difficult for the student to get to work. Some thought that an all day program on Saturdays would take care of this problem. The over-all response to a work-experience program was high and many thought it should be implemented.

When the employers were questioned about the area vocational technical schools that were being organized, they were much in favor of them. Many thought that this would help alleviate many of their problems of obtaining properly trained employees. The machinery dealers and repair shops had been observing the formation of these schools and were very interested. Almost all felt that it was impossible for the students to receive adequate technical training in the high school and these vocational schools would fill the gap between high school and college degree men.

The employers were seldom critical of the public secondary schools and their programs but admitted that they did not know much about the operation of them.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The passage of the Smith-Hughes Act of 1917 provides for the instruction of agriculture in the public high schools of the United States. Section ten of this law limited agricultural instruction to that of ranching and farming. Changes in agriculture made it necessary to have fewer people engaged in ranching and farming but brought about an increase in the demand for non-farm agriculture occupations.

In 1963 the Kansas Legislature passed Senate Bill No. 438 which provided for the establishment of area vocational technical schools within the state of Kansas. Section one of this bill declared the purpose of the bill was to train students for productive employment as skilled workers and technicians. These schools were to be operated under the combined effort of the state of Kansas and the local communities. With the passage of Senate Bill No. 438, plans were started for the formation of one of these schools to be located at Hays, Kansas. The intended plan was to include the school districts of Ellis and Trego Community High School in the area vocational technical school district.

With these thoughts in mind the two major objectives of this study were to: (1) survey the employment opportunities in non-farm agricultural occupations in the two high school districts, and (2) suggest what changes in the educational program could be made to more fully prepare these students for their chosen occupations.

A list of 31 non-farm agricultural firms in Trego County and the community of Ellis was obtained. Twenty-seven of these were found to be doing 50 per cent or more of their business with the farmer and were included in the report. These were interviewed by the author and the information obtained was used in the study.

These firms were divided into four groups according to their line of business. They were:

1. Farm machinery and implement dealers and machine repair shops.
2. Earth contractors for farm services such as terraces, dams, and wells.
3. Elevators and feed mills.
4. Others.

At the time of the interview, the farm machinery and implement dealers and machine repair shops, consisting of seven firms, employed 27 men. These firms stated that they would need 14 new men in the next two years and 22 new men in the next five years.

The earth contractors, consisting of six firms, employed eleven men and stated that they would need four new men in the next two years and seven new men in the next five years.

The elevators and feed mills, consisting of eleven firms, had 35 men under employment at the time of the interview and anticipated a need of seven additional men in the next two years and 13 men in the next five years.

The three remaining firms listed under "other" had a total employment at the time of the interview of 20 men and stated that

they would need three additional men in the next two years and seven men in the next five years.

This gave a total employment at the time of the interview by the 27 firms of 93 men with an anticipated need of 30 additional men needed in the next two years and 49 needed in the next five years. While this would show a need for approximately ten new employees each year for the next five years, there were 19 students who graduated with three or more units of vocational agriculture each year from the two high schools in the surveyed district.

The pay scale of these men ran from \$1.25 per hour for 40 to 50 hours per week up to approximately \$150 per week for mechanics when their commission was included. As a group, the mechanics were the highest paid men who did not have managerial responsibility. Several of the elevator managers were paid on a commission according to their volume of business.

When questioned about their training programs for new employees, nine of the firms were all that had any form of organized training. These were either conducted by the Extension Service of Kansas State University or by the wholesaler and supplier.

Each of the employers were asked for information regarding possible improvements that could be made in the high school programs. Although there was little consistency, there were three items mentioned most commonly. They are:

1. Improve the spelling ability of the graduates.
2. Improve the writing ability of the graduates.

3. Include more training in the area of economics.

Some of the employers mentioned that if the student came from a farm, his mechanical ability was adequate to operate equipment, but if the employee was of urban background, he would not have the required mechanical ability to operate equipment.

A possible work experience program was explained to the employers where junior or senior students in high school would have the opportunity to work for approximately 60 to 120 hours in four different firms in the community to gain experience in these areas. It was pointed out that this would be a cooperative program between the high school and the business firm and that there would be no exchange of money. All of the firms stated that they thought this would be a good plan and would cooperate with the schools if such a program was instituted.

CHAPTER V

IMPLICATIONS OF THE STUDY

It is the belief of the author that vocational agricultural training as it has been in the past has done a fine job of training for agricultural occupations, but there were some changes needed to better meet the changing demands of agriculture and agri-business.

I. HIGH SCHOOL TRAINING

A few modifications might be made in the freshman and sophomore years of vocational agriculture to include some in the breadth and scope of agriculture, but most of the time would be spent on plant science, animal science and farm mechanics. All students interested in either production agriculture or non-farm agricultural occupations would take these courses and then at the junior year a separation would be made for those planning for non-farm agricultural occupations from those planning on production agriculture. Those taking production agriculture would continue much the same as in the past with vocational agriculture III, while those in the non-farm agriculture classes would have a work experience program during their junior or senior year where they would explore various fields of agri-business by actually working on the job for a period of two to four hours a day for a total of 30 days. During the school year they would have the opportunity to explore four different occupations. There would be no pay exchange between the school, the student, or the business firms involved, but

the employer would assist in the evaluation of the student. This would not be a technical training program but an exploratory program. The cooperation of other vocational education departments of the high school would facilitate such a program. After high school, the students would attend a vocational school to learn the technical training.

All students, those in production agriculture and non-farm agriculture courses, would participate in the Future Farmers of America organization for leadership training. A continued emphasis would be placed on science, math, and other basic courses. The students planning on entering non-farm agricultural occupations would take additional business courses such as typing, bookkeeping, and office machine operation. At least one economics course would be included for both groups of students.

It was the opinion of the author that if the number who returned directly to the farm and those who attended a four year college and obtained a degree in professional agriculture were removed there would not be enough students graduating with vocational agriculture training to fill the needs of the ten new employment positions in non-farm agriculture occupations as was shown needed by the report. It would seem likely that urban students would have to fill some of these positions. Surely these students would profit from some vocational agriculture training offered by the high school.

II. POST HIGH SCHOOL TRAINING

After the students had graduated from high school, those

interested in non-farm agriculture occupations would attend vocational schools established in the state for their technical training, while those interested in agricultural production would attend either a four year agricultural college or return to the farm and attend evening courses in agriculture offered by the local vocational agriculture department or by the area vocational technical school. This would require the hiring of additional agricultural instructors on either the local level or by the area vocational schools to conduct these programs. Most of the adult farmer courses would be conducted in the evening but the instructor would visit with the farmer and wife during the day on individual basis on matters such as farm management decisions. It would be anticipated that the vocational agriculture teacher would spend from 40 per cent to 50 per cent of his time working with the adult farmers in the community. It is not the belief of the author that these services should be free to the adults, but that there would be an enrollment fee to cover a portion of the cost of operation.

Careful consideration would be given to the older farmers in the community in an effort to maintain or improve their standard of living and prevent them from being displaced at a time in life when they are too old to retrain for other occupations. A few dollars spent on education would likely save many dollars of welfare money.

III. SUGGESTIONS FOR FURTHER STUDY

This study did not attempt to include any information in regard

to the establishment of new agri-business firms in the district. As mentioned earlier, there were no firms dealing exclusively with the construction or manufacturing of farm machinery or equipment. Another area not included was rural electrical contractors. At the time of the interview rural electrical work was being done by urban electrical firms in the district. It seemed logical to the author that with the increased use of electricity on the farms that there was a potential for the establishment of a rural electrical contractor in the district.

It was observed by the author that many of the bookkeepers in the agri-business firms were women. It appeared that this was an employment area frequently overlooked by young men in agriculture.

A study in this same district on the number of farmers under 40 years of age, and their willingness to participate in an adult agricultural education program, would be of interest and value to the two high schools in the district in planning their high school and adult curriculum.

BIBLIOGRAPHY

Agan, Raymond J. "A Study of Non-Farm Agricultural Occupations in Kansas," Manhattan, Kansas: Kansas State University, 1963.
(Mimeographed.)

Clark, Raymond M. "The Nature of Non-Farm Agricultural Occupations," New Dimensions in Public School Education in Agriculture. Danville, Illinois: Interstate Printers and Publishers, Inc., 1962.

Fuller, Gerald R. "Guidelines for Teaching OFAO," Agricultural Education, 37 (January, 1965), pp. 167-168.

Garner, Raymond. "Promising Patterns in High School Vocational Agriculture," Agricultural Education, 37 (March, 1965), pp. 214-216.

Hamlin, H. M. "Intregation into the Vocational Education Movement," Agricultural Education, 37 (January, 1965), pp. 176-177.

Harris, Wilmer L. "Teaching Farm Related Occupations in Maryland," Agricultural Education, 35 (July, 1963), pp. 16-17.

James, Gerald B. "Teaching for Occupational Guidance in Agriculture," Agricultural Education, 36 (April, 1964), pp. 226-227.

James, Gerald B. "New Dimensions in Agricultural Education in North Carolina," New Dimensions in Public School Education in Agriculture. Danville, Illinois: Interstate Printers and Publishers, Inc., 1962.

Juergenson, E. M. "California Considers New Directions for Agricultural Education," Agricultural Education, 35 (June, 1963), pp. 256-257.

Langdon, Charles L. "It Might Surprise You to Study Your Community," Agricultural Education, 35 (March, 1963), pp. 185-186.

Lange, E. H. "A Canadian Approach to Training the Farmer of Tomorrow," American Vocational Journal, 39 (April, 1964), pp. 16-17.

Lawrence, Layle D. "Agricultural Occupations - A Course for Seniors," Agricultural Education, 36 (January, 1964), pp. 140-141.

"Liquidation Ahead for 2.4 Million Farmers?" U.S. News and World Report (March 22, 1965), pp. 59-60.

Lund, Duane. "Opportunities for Agricultural Education," American Vocational Journal, 40 (February, 1965), pp. 21-22.

McComas, J. D. "Teacher Tasks in Agricultural Occupations," Agricultural Education, 37 (January, 1965), pp. 164-165.

McCune, Duane A. "Kansas High School Grads Want Area Vocational Technical Schools," Agricultural Education, 36 (December, 1964), pp. 135-136.

Mumphrey, Anthony. "Too Many Vocational Agricultural Graduates?" Agricultural Education, 37 (February, 1965), pp. 203-204.

Phipps, Lloyd J. Your Opportunities in Vocational Agriculture. Danville, Illinois: Interstate Printers and Publishers, Inc., 1957.

Sparrow, Richard L. "Exploring Farm Related Occupations," Agricultural Education, 36 (April, 1964), pp. 228-229.

Sullards, George F. "Arkansas Teaches for Off-Farm Agricultural Occupations," Agricultural Education, 37 (January, 1965), pp. 163-164.

Sutherland, S. S. (Chm.). Training Required by Workers in Agricultural Business and Industry. Sacramento, California: California State Department of Education, 1957.

Tenney, A. W. "Agricultural Education for a Changing Rural America," American Vocational Journal, 37 (March, 1962), pp. 12-13.

..... "Agricultural Occupations - the Educational Needs in the United States," Agricultural Education, 35 (April, 1963), pp. 211-212.

..... "How Agricultural Education Can Cooperate with Other Vocational Educational Services," Agricultural Education, 36 (December, 1964), pp. 138-139.

..... "A Basis for New Courses of Study," Agricultural Education, 37 (March, 1965), pp. 211-212.

Thompson, O. E. "New Dimensions in Agricultural Education in California," New Dimensions in Public School Education in Agriculture. Danville, Illinois: Interstate Printers and Publishers, Inc., 1962.

Weaver, Gilbert G. (Chairman). Area Vocational Education Programs. Research and Publications Committee. Washington, D. C.: American Vocational Association, Inc., 1959.

"Where Farm Boys Learn Sales and Service," Furrow, (March-April, 1964), p. 19.

A STUDY OF EMPLOYMENT POTENTIAL AND TRAINING REQUIREMENTS FOR
NON-FARM AGRICULTURE OCCUPATIONS IN TREO COMMUNITY HIGH
SCHOOL AND ELLIS HIGH SCHOOL DISTRICTS
WAKEENY AND ELLIS, KANSAS

by

Robert M. Schneider

B. S., Kansas State University, 1954

ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF SCIENCE

School of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1965

The passage of the Smith-Hughes Act of 1917 provided for the establishment of vocational agriculture departments in the public high schools of the United States. Instruction in agriculture in these courses was limited by the law to instruction in ranching and farming. Changes took place in agriculture which reduced the demand for people in ranching and farming but increased the demand for persons in non-farm agriculture occupations.

Provisions were made for the establishment of area vocational technical schools with the passage of Senate Bill No. 438 by the Kansas Legislature in 1963. This bill made it possible to teach for employment as skilled workers and technicians in non-farm agricultural occupations as well as other occupations. Plans were started for the establishment of one of these schools at Hays, Kansas, which would include the school districts of Ellis and Trego County Community High School.

The purposes of the study were to (1) survey the employment opportunities in non-farm agricultural occupations in the two high school districts, and (2) suggest changes in the educational program to more fully prepare those students for their chosen occupations.

The author interviewed the 27 non-farm agricultural firms in the district and they were divided into four groups according to their business activities. The divisions were:

1. Farm machinery and implement dealers and machine repair shops.
2. Earth contractors for farm services such as terraces, dams, and wells.
3. Elevators and feed mills.
4. Others.

At the time of the interviews, there were 93 men employed by the 27 non-farm agricultural firms. These firms stated that there was a need for 30 additional men for the next two years and for 49 additional men for the next five years after the interview. This gave an average of approximately ten new men employees each year. For the three years prior to the interview, there was an average yearly graduation of nineteen students, from the high schools in the surveyed district, with three or more units of vocational agriculture.

The pay scale for these non-farm agricultural occupations ran from \$1.25 per hour for 40 to 50 hours per week to approximately \$150 per week for some mechanics. Some employees were paid on the commission basis.

Of the 27 firms, nine had some form of organized training for their employees. These were conducted by either the Extension Service of Kansas State University or by the wholesalers to the firms.

The three major items for improvement mentioned by the employers in regards to the educational systems of the high schools were:

1. Improve the spelling ability of the graduates.
2. Improve the writing ability of the graduates.
3. Include more training in the area of economics.

When a cooperative work experience program was explained to the employers for junior and senior high school students, all employers showed interest in it and said they believed such a program was good and they would cooperate with the schools if such a plan was instigated.